VALUE 100K

PC Mount; 1/2W; No Bushing; Shaft Length 1" (Nylon); Diameter of body 15/16".

Part No.	10-99	100-999	1000+
18PMM 100K	$0.29	$0.19	$0.09

POTENTIOMETER – 1/4W

PANEL MOUNT

- Solder lugs
- Diameter of body: 5/8"
- Shaft length: 1/2"
- Shaft diameter: 1/4"

Part No.	1-9	10+
18PMG100	$0.25	$0.20

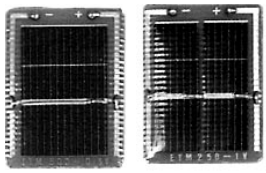
TRIMMER POTENTIOMETER

1 M Ohm - Size .3" x .2" , Top Adjusted

Part No.	1-9	10+
18WTH1M	$0.35	$0.25

SOLAR CELLS

The solar cells are laminated with high quality resin material on the PC board with excellent moisture protection. These modules are designed for educational kits or projects. 2mm thick. **These can be connected in series or parallel to increase voltage or current output**



Part No.	Voltage (Voc)	Current Isc (typ)	Size mm	No. of Cells/ Modules	1-9	10+
08SLC01	0.5V	250mA	40x80	1	$4.50	$3.75

POTENTIOMETER GRAB BAG

30 PIECES

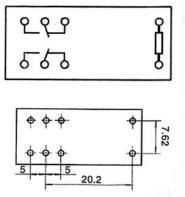
Contains 10 pieces of 100K ohm, 5 pieces 50K ohm, 5 pieces 10K ohm, 5 pieces 1K ohm, 5 pieces 1M ohm.

Part No.	1-9	10+
32POTGRAB2	$9.50	$8.75

RELAY 12VDC

DPDT; 5A

- 2 Form C / DPDT
- Coil resistance – 275 ohms

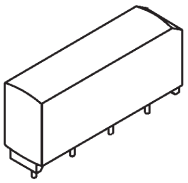


Part No.	1-9	10+
22R12DPT	$1.75	$1.25

RELAY REED

12V, SIP

- Tyco V23100-V4512-A000
- Contact Arrangement: 1 Form A (SPST)
- All 4 pins – In line and .2" apart

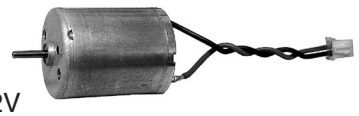


Part No.	1-9	10+
22DR12	$0.85	$0.75

MOTOR DC 6V-18V

HIGH TORQUE

- **Motor Body:** 0.96" Diameter 1.2" Length
- **Shaft:** 0.08" Diameter 0.35" Length
- **Speed:** 8,500 RMM @ 12V
- **Current Draw:** 55mA @ 12V (no load)
- Heavy duty
- Operates from 6Vdc to 18Vdc



Part No	Special Price
29DCM8	$0.95 ~~(Reg. $2.10)~~

STEPPER MOTOR UNIPOLAR

- DC 5-9V Stepper Motor
- Dual coil both center tapped 50 Ohm coil
- Shaft length = 0.5", Dia. = 0.08"
- 6 wire leads 9" long
- Mounting holes = 1.6" apart
- Epson # STP-32N124

Part No	Special Price
29STP12	$2.50 ~~(Reg. $5.95)~~

STEPPER MOTOR UNIPOLAR

- DC 5-9V Stepper Motor
- Dual coil both center tapped 120 Ohm coil
- 6 wire terminated into a 6pin dual row female connector
- Mounting holes = 1.35" apart
- Epson # MCM-1

Part No	Special Price
29STP19	$2.50 ~~(Reg. $5.25)~~

POWER ADAPTER CHARGER

5V DC @ 200MA

Provides USB port to charge cell phones, tablets and other devices.

Part No	Special Price
16D5DCUSB	$1.40 ~~(Reg. $2.95)~~

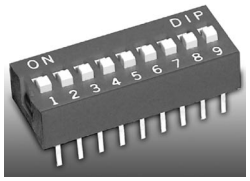
WALL ADAPTER

- Input: 120VAC
- Output: 12VDC - 100 ma
- 2 2.5 mm male plugs
- Can charge 2 devices simaltaneously
- UL

Part No. 16D12CBR • Price: $1.10

SURPLUS CLOSE OUTS

DIP SWITCH - 9 POS

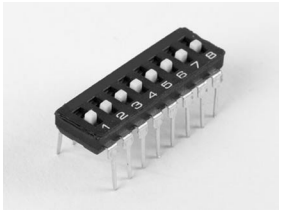


- 18-Pin DIP Switch
- Each Switch SPST

Part No.	Description	Price
17DIP9SS	18 Pin DIP SPST	**$0.45**

DIP SWITCH 8 POSITION

ALCO GDS08NTS



- Low profile
- 8 position DIP Switch

Part No. 17DIP8SSALCO • Price: $0.35 ~~***(Reg. Price $0.70)***~~

250 WATT POWER SUPPLY

ZIPPY MODEL P1G-6250P

Limited availability, high current. 100% brand new, high quality switching power supplies designed for server, workstation, storage system, IPC applications.

DC OUTPUTS

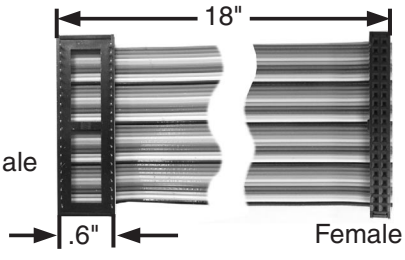
Voltage	Current (max)
5V	25A
12V	12A
-5V	0.5A
-12V	1.0A
3.3V	14A
+5VSB	1.5A

Note: The output power of 5V & 3.3V may not exceed 138 watts. The output power of 5V, 3.3V and 12V may not exceed 228 watts. Total output power not to exceed 250 watts

- AC Input: 90 ~ 264 VAC full range
- Frequency: 60 ~ 50 HZ
- Dimensions: 8" x 4" x 1 1/2", 205 x 100 x 40.5 mm.
- Connectors: (1) 20 pin ATX, (1) ATX 12V, (1) 6 pin P4, (5) 4 pin peripheral, (1) 4 pin floppy
- Over power, over voltage, over current and short circuit protection
- Cooling: TWO 40mm DC fans
- 1% line regulation

Part No.	1-4	5+
01P1G6250P	49.95	39.95

RIBBON CABLE 40 PIN WITH FEMALE SOCKET



- Male IDC Connector
- Length: 18"

Part No.	Special Price
24DVR164CBL	$2.95 ~~*(Reg. $8.95)*~~

MOMENTARY TACT SWITCH

MINIMUM PURCHASE OF 10 PIECES

- SPST NO
- Tact switch
- Size: 6mm x 6mm x 3.5mm

Part No	10-99	100+
17MOMDTS	$0.15	$0.12

BUZZER MINI

5V DC

- Sound output 85db
- Resonant frequency 2.3KHz ±300
- Leads bent at 90°

Part No.	1-9	10-99	100+
26BZCEB	$0.50	$0.40	$0.30

SERVO MOTOR

Ideal for robotic projects. All specs are at 4.8/6 volts.

- **Size:** 41 x 20 x 37 mm
- **Torque:** 3.5Kg/cm
- **Wt.**: 38 gms

Part No. 29SV66 • Price: $5.25 ~~**(Reg. $8.95)**~~

RCA CABLE

- RCA Male to RCA Male
- Length: 6'

Part No.	Special Price
05CA20B	$0.95 ~~*(Reg. $2.50)*~~

WIRE

A. 2 conductor, 24 Ga each, solid, blue, copper wire (not tinned). Spool of 5,000 ft.; wt. 30lb/spool.

Part No. 27SURP10 • Price: $45.00 ~~**(Reg. $95.00)**~~

B. 3 conductor, 32 Ga each, solid white with red and blue tracer, 6,600 ft. per spool; wt. 50 lb/spool.

Part No. 27SURP20 • Price: $45.00 ~~**(Reg. $120.00)**~~

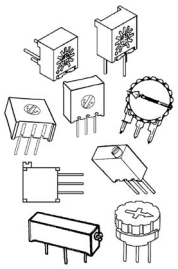
SIREN 6 TONE

- 6 tone electronic siren
- 12V DC operation
- Adjustable mounting bracket
- 4" long, 3.5" dia / color black
- Cable length 15"

Part No. 26ST6 • Price: $6.95

TRIM POT GRAB BAG

PRECISION, MULTI-TURN & SINGLE TURN TRIMMERS

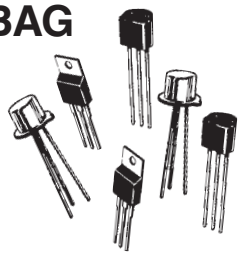


Total of 50 pieces with great mix of assorted precision, multi-turn trim pots and assorted single turn trimmers. Both vertical and horizontal mount, plus other styles and different sizes. Useful, standard values include all, most or more of the following: 100 ohm, 200 ohm, 500 ohm, 1K, 2K, 5K, 10K, 20K, 50K, 100K, 500K, 1M, 2M. Both cermet and wire-wound styles. Various wattages including 1/4W, 1/2W, 3/4W. Very unique assortment offers widest variety at less than 20 cents per trimmer!

Part No.	1-9	10+
32TRIMGRAB	$11.95	$9.95

TRANSISTOR GRAB BAG

45 PIECE ASSORTMENT

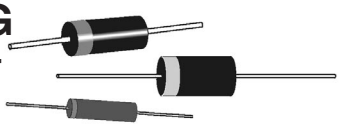


Various transistors — Bipolar (NPN, PNP) and JFET, signal, RF, power types in various packages (TO-92, TO-18, TO-220).

Part No.	1-9	10+
32TRAGRAB	$6.75	$5.95

DIODE GRAB BAG

50 PIECE ASSORTMENT

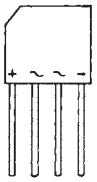


1 amp, 3 amp and 6 amp devices. Includes General Purpose, fast recovery, schottky, and switching diodes. Wide range of voltages. Complete list of part numbers included in each kit for easy identification. About a $ 10.00 value for half the price.

Part No.	1-9	10+
32DIODEGRAB	$4.75	$3.95

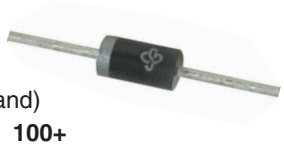
BRIDGE RECTIFIER

2 A, 200V PIV



Part No.	1-9	10-99	100+
11RS203	$0.25	$0.20	$0.15

RECTIFIER DIODE

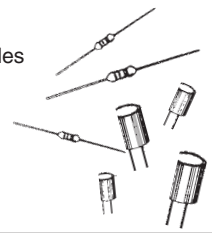


1.5 A, 400V

- GP15G (General Semiconductor Brand)

Part No.	1-99	100+
11GP15G	$0.06	$0.04

INDUCTOR GRAB BAG

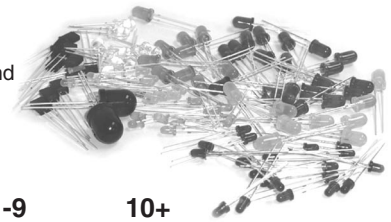


34 piece assortment. Tremendous mix of values. Some axial and radial epoxy fixed inductors. Includes all, most or more than the following values: .39µh, .68µh, 1.2µh, 10µh, 22µh, 150µh, 470µh, 1.5mh, 2.7mh, 3.3mh, 6.8mh, 12mh, 22mh 27mh, 68mh, 120mh, 150mh.

Part No.	1-9	10+
32INDGRAB	$8.95	$7.95

LED GRAB BAG

100 PIECE ASSORTMENT

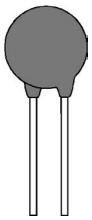


100 piece assortment of Red, Green, Yellow LED's. Excellent variety with regards to colors and sizes. Includes standard 5 mm and 3 mm round dome (T 1 3/4, T 1), plus rectangulars and perhaps more.

Part No.	1-9	10+
32LEDGRAB	$5.90	$5.30

DISC CAPACITOR GRAB BAG

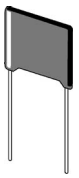
200 PIECE ASSORTMENT



Wide range of values, with many higher (500V & 1KV) voltages plus NPO's. Values including 2.2pF, 10pF, 22pF, 27pF, 47pF, 180pF, 220pF, 470pF, 680pF, .001µF, .0015µF, .002µF, .022µF, .0033µF, .0047µF, .01µF, .033µF, .068µF, .1µF.

Part No.	1-9	10+
32DISKGRAB	$3.90	$3.40

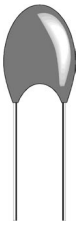
MYLAR CAPACITOR GRAB BAG



100 piece assortment. Wide range of values with working voltage from 50V to 250V. Values including .001µF, .0022µF, .0033µF, .0047µF, .0068µF, .01µF, .022µF, .033µF, .047µF, .1µF, .22µF, .33µF, .47µF, .68µF, 1µF

Part No	1-9	10+
32MYRGRAB	$4.50	$4.25

TANTALUM CAPACITOR GRAB BAG



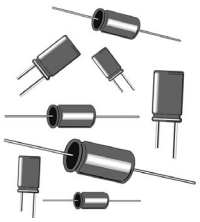
50 PIECE ASSORTMENT

Wide range of values and styles, including dip radials and assorted axials.

Part No.	1-9	10+
32TANTGRAB	$4.90	$4.45

ELECTROLYTIC CAP GRAB BAG

100 PIECE ASSORTMENT



Unbeatable, useful assortment of values includes 2200µF, 1000µF, 470µF, 330µF, 220µF, 100µF, 47µF, 22µF, 10µF, 4.7µF, 2.2µF and 1µF. Great mix of both radial and axial leads and voltages.

Part No.	1-9	10-49	50+
32LYTICGRAB	$4.75	$4.45	$3.99

SURPLUS CLOSE OUTS

KEYPAD - 12 BUTTON

- Matrix code
- Ivory color
- Typical telephone keypad

Part No.	Special Price
17KPSPECIAL	$2.75 *~~(Reg. $6.50)~~*

DESOLDER PUMP

High quality desolder pump. Heavy duty plastic construction. Close out item. 7.3" total length. Powerful suction. Black color, ESD safe. Teflon nozzle.

Part No.	Description	1-9	10-99	100+
060828	Desolder Pump	$3.00	$2.50	$2.00
060882	Extra Tip	0.60	0.55	0.50

SCREWDRIVERS

2 PC SET

- Phillip #2 x 4"
- Slotted 1/4" x 4"

PHILLIPS

SLOTTED

Part No. 0601SPSET • Price: $1.75 ***~~(Reg. $2.95)~~***

NUT DRIVERS

Chrome plated, 1/2" nut driver.

Part No.	1-9	10+
060169	$1.25	$0.95

Crescent® SCREWDRIVER PHILLIP #4

MODEL SDFP88

Shaft Length – 8"
Total Length – 13"

Part No. 0601SDFP88 • Price: $4.90

STEREO TO MONO MINI PLUG ADAPTOR

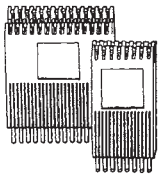
FEMALE TO MALE
HI-REL, 3.5 MM

Part No	1-9	10+
0703SMAM	$1.00	$0.90

3M TEST CLIP

40 PIN

Designed for easier DIP IC testing and troubleshooting.
Width 0.6"



Part No. 03TC40-3M • Price: $9.90 (*Reg $14.95)*

CHICAGO CASE COMPANY
ATTACHE TOOL CASE

INDESTRUCTO SERIES

- High impact polyethylene case
- Extra heavy duty aluminum frame
- Full length piano hinge
- Black color, 18' x 13' x 6"
- Two tool pallets

Tools Not Included

Part No. 0611188RSR • Price: $75.00 ***~~(Reg. Price $150)~~***

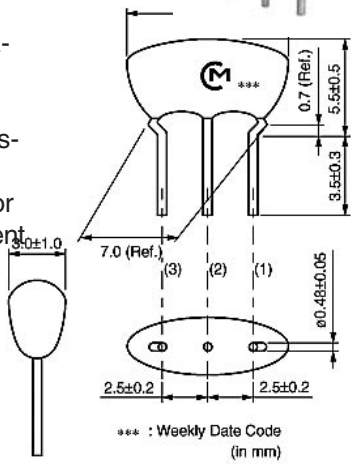
CERAMIC RESONATOR

3-LEAD 4.00MHZ RESONATOR

MODEL CSTLS_G

MHz Lead Type – Standard Frequency Tolerance for General Usage

- Built in load capacitors
- Stable over a wide temperature range
- Compact, lightweight and exhibits superior shock resistance performance
- Enable the design of oscillator circuits requiring no adjustment

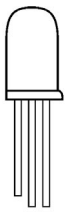


Applications
- DTMF generators
- Clock oscillators for microcomputers
- Remote control units

Part No.	1-9	10+
15CST4.00M	$0.70	$0.60

BICOLOR LED

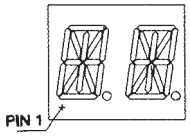
AVAGO / AGILENT / HP



- HLMP – 4,000
- 5mm, T 1-3/4
- Two different colors depending on leads used – Red / Green
- Min. purchase of 10

Part No.	10-99	100+
08HLMP4000	$0.15	$0.12

ALPHANUMERIC DUAL



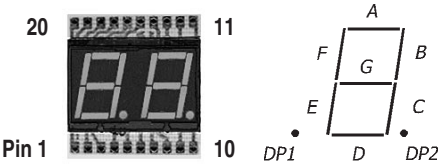
- 6 dual digit alphanumeric display
- 0.56"; green color; Lite On LTP-3790JG

Part No.	1-9	10-99	100+
08LTP3790JG	$0.70	$0.60	$0.50

LED

DUAL DIGIT RED 7 SEGMENT DISPLAY

Character height: .5"
Common Anode
PCB Type (No leads) – If leads are required, use single row male header (Part No. 240220S)

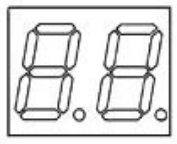


PINOUTS

1	Ec1	6	Gc2	11	ca1, 2	16	Ac1
2	NC	7	Ec2	12	Bc2	17	NC
3	Dc1	8	Dc2	13	Ac2	18	Fc1
4	Cc1	9	Cc2	14	Fc2	19	NC
5	DPc1	10	DPc2	15	Bc1	20	Gc1

Part No.	Description	1-9	10-99	100+
08NSN584	Display	$.45	$.35	$.25
240220S	Header	.60	.55	.50

LITE ON DUAL 7 SEG. DISPLAY GREEN

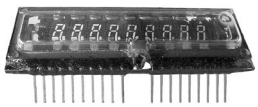


- 0.4", CA Dual Display
- Mounted on spacer

Part No.	1-9	10-99	100+
08LTD4608HG	$0.40	0.35	0.30

9 DIGIT FLUORESCENT DISPLAY

Glass enclosed, 9 digit fluorescent display. Itron # FG95H1. Japanese mfg. No specs available, for hobby use.



Part No. 08FG95H1 • Price: $4.95

OPTO BONANZA

LED / QTY PRICING

Typ. Intensity 1.5mcd.

Part No.	Description	1K	10K
08L32RD	Red; T1; 3mm	$0.035	$0.025
08L53RD	Red; T1-3/4; 5mm	0.035	0.025

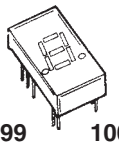
PHOTO-TRANSISTORS

Fig. A

Fig. B

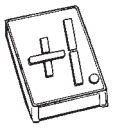
Part No.	Fig.	1-9	10-99	100+
08OP500W	A	0.40	0.30	0.25
08OP501SW	B	0.40	0.30	0.25

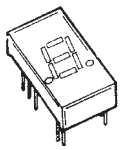
7 SEG. DISPLAY SINGLE



Part No.	Description	10-99	100+
08TIE812	0.8"; C.A.; Single Digit	0.60	0.50
08TIE813	0.8"; C.C.; Single Digit	0.60	0.50

7 SEG DISPLAY



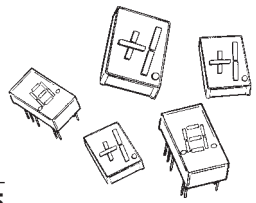


Part No.	Description	10-99	100+
08MAN3051	0.3"; C.A.; Sng.Dig.; Green	$0.40	$0.30
08MAN82Y	0.3"; C.A.; Sng. Dig.; Yellow	0.40	0.30
08MAN6520	0.6"; C.A.; Sng. Dig.; Green	0.40	0.30
08MAN6530	0.6"; C.A; Overflow; Green	0.25	0.20
08MAN6550	0.6"; C.C.; Overflow Dig.; Green	0.25	0.20
08MAN6630	0.6"; C.A.; Overflow; Red	0.25	0.20
08MAN6930	0.6"; C.A.; Overflow; Red	0.25	0.20

SEVEN SEGMENT DISPLAY GRAB BAG

ASST SIZES AND COLORS

10 PCS./BAG



Part No. 32GRABSEG • Price $2.95

LED PANEL INDICATOR LAMP

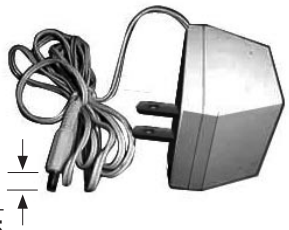
- Red plastic housing
- 1/2 inch mounting
- Long, wire leads

Part No.	1-9	10-99	100+
091090A112	$0.45	$0.42	$0.39

SURPLUS CLOSE OUTS

WALL ADAPTER

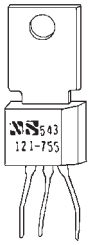
- Input: 120VAC
- Output: 12VDC - 300 ma
- 5.5Mm barrel plug
- 2.5Mm center positive
- White
- UL



Part No. 16D12-.3 • Price: $1.65

TRANSISTOR

NPN-Si, AF power amp, Zenith #121-755 (cross to ECG 190®). Pre-formed leads.



Part No.	1-9	10-99	100+
11121-75	$0.65	$0.49	$0.45

AXIAL LEAD METALLIZED POLYESTER CAPS

ALL 100V

SOLD IN 100 PC. LOTS ONLY

Part No.	Value			Price/Pkg.
14MP100.015U	.015µF	100V	10%	3.00

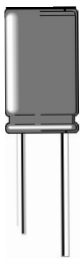
RADIAL LEAD ELECTROLYTIC CAPS

SELLING "AS IS" – OLDER DATE CODES

SOLD IN 100 PC. LOTS ONLY

Part No.	Value		Price/Pkg.
14ER10330U	330µF	10V	4.00
14ER6.3330U	330µF	6.3V	3.00
14ER6.3470U	470µF	6.3V	2.00
14ER10470U	470µF	10V	3.00
14ER6.31000U	1000µF	6.3V	4.00

NON-POLAR ELECTROLYTIC CAP



10 PC. MINIMUM

4.7µf, 160V.

Part No.	10-99	100+
14ERN1604.7U	$0.24	$0.19

RSR LIGHT METER ADAPTOR

MODEL LX-02

- 0 to 50,000 in 3 ranges
- Output 0.1mV DC per 1,10,100 Lux
- Used on any digital meter to read lux
- Accuracy: 5% +0.1mV
- Size: 3.9" x 1.9" x 1.0"

Part No.	Price
01LX02	$39.00

28 PIN SOLDER PRACTICE IC'S

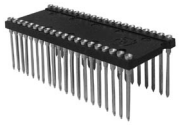
13 PIECE TUBE

28 pin dual-in-line (DIP) package IC's for solder practice usage. Unmarked and not guaranteed functionally or electrically. Sold "by the tube". Each tube contains 13 IC's.

Part No.	Description	Price
1028PTUBE	13 piece tube of 28 pin DIP IC's 5/8" width. For solder practice only	$2.95

40 AND 64 PIN MACHINE TOOLED WIRE WRAP SOCKETS

GOLD LEADS

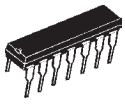


Level 3 machine tooled wire-wrap socket with gold leads and recepticles. Perfect for proto-typing with 40 pin .7" width and 64 pin 1" width devices.

Part No.	Description	Price
19SURP40WW	40 Pin Wire Wrap Socket	$5.95
19SURP64WW	64 Pin Wire Wrap Socket	9.50

INTEGRATED CIRCUITS

MINIMUM PURCHASE OF 10 PIECES FOR ANY IC TYPE



Indust. No.	Part No.	10-99	100+
74H00	1074H00	$0.10	$0.08
74L00	1074L00	0.10	0.08
74HCU04	1074HCU04	0.10	0.08
27C512N (One Shot)	1027C512N	1.20	1.00
7403	107403	0.15	0.12
74LS00	1074LS00	0.30	0.20
74LS04	1074LS04	0.40	0.24
74LS08	1074LS08	0.40	0.24
74F74	1074F74	0.12	0.08
NE555	10555	0.22	0.15
LM741	10741	0.22	0.15
LM10	10LM10	1.20	0.85

COIL – .39 µH

16 turn coil of .39 µh inductance. Q=100 @ 50MHz. SFR 600 MHz (min.). Ideally suited for high frequency oscillators (around 80 MHz to 100 MHz)

Part No.	1-9	10-99	100+
15SCOIL	$0.30	$0.25	$0.20

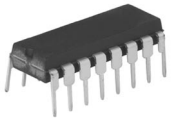
SIP RESISTOR NETWORK

10 PCS. PER PAK

Part No.	Description	Price/Pak
13SIP1	390Ω 10 Pins, 5 Resistor	$0.50
13SIP2	4.7K 8 Pins, 4 Resistors	0.50

DIP RESISTOR

ISOLATED RESISTORS – 10 PCS. PER PAK



Part No.	Description	Price/Pak
13DIP2	3.3KΩ 16 Pins, 8 Resistors	1.00

CAPACITORS

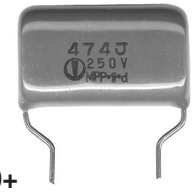
MYLAR AXIAL; TOLERANCE +5 TO+10% VARIOUS VALUE AND VOLTAGES

Part No.	Value	Voltage	10-99	100+
14MA200.01U	.01µF	200V	$0.06	$0.04
14MA100.1U	.1µF	100V	0.06	0.04

CAPACITOR MYLAR RADIAL

.47µF 250V

Size: 0.9" x 0.5" x 0.3"
Lead Spacing: 0.6"



Part No.	1-99	100-999	1000+
14MR250.47U	$0.16	$0.12	$0.10

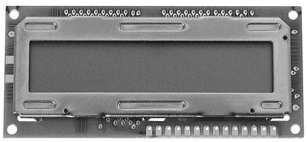
MYLAR BOX CAP

.047µf 1,000V; 7/8" lead spacing

Part No.	1-99	100-999	1,000+
14MR1K.047U	$0.08	$0.07	$0.06

LCD DISPLAY 16 X 2

HITACHI: LM071L

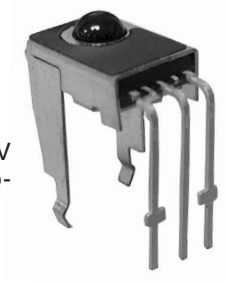


- 16 x 2 LCD module
- 5 x 7 dot matrix characters
- 5mm charcter height
- 3.15" x 1.41" x 0.37" size
- Spec Sheet download at ***http://www.elexp.com/srp_cd40.htm***

Part No. 08LCD40 • Price $5.95

INFRARED DETECTOR

SHARP: GP1U27S



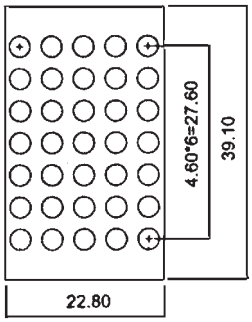
- Infrared detecting unit for remote control
- For general electronic equipment use – AV equipment, home appliance, OA equipment
- BPF center frequency 40KHz

Part No.	1-9	10-99	100+
08GP1U27S	$0.90	$0.80	$0.70

LED MATRIX DISPLAY

5 X 7 MATRIX; 1.5" ht

Light up red.

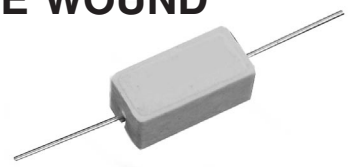


Part No.	Description	1-9	10+
08F12571AS	Anode Column, Cathode Row	$1.50	$1.20
08FYM12571BS	Cathode Column, Anode Row	1.50	1.20

RESISTORS WIRE WOUND

5W; +10%

VALUE: 5.6 OHM, 68



Part No.	Value	10-99	100+
130510 5.6	5.6 ohm	$0.15	$0.10
130510 68	68 ohm	0.15	0.10

KidWind PROJECT ALTurbine

The ALTurbine (Adaptable Learning Turbine) is designed for wind energy experiments for classrooms and science projects. Build this turbine to test motors, gears, and blade designs. Test your power output with LED and incandescent bulbs, a mini water pump, and more.

Full Kit Includes

- Wood Tower & Base
- Parts to build ALTurbine Head w/Hub, Driveshaft & Gears
- (5) 18" Balsa Wood Sheets
- (5) 16" Coroplast Sheets
- (1) Digital Multimeter
- (2) DC Generators
- (25) 1/4" Dowels
- (1) Additional Driveshafts
- LED/Incandescent Light Bulbs
- Turbine Test Prop
- Ultra Capacitor
- Low Voltage Water Pump w/ Graduated Cylinder
- Sandpaper
- Curricular materials
- Assembly instructions

Parts Only Kit
The ALTurbine parts only kit is like the full kit. It comes with the materials you need to do a wind energy experiment, but it does not include blade material or electrical devices to attach to the turbine.

Part No.	Description	Price
32KW100	Full Kit	$125.00
32KW105	Parts Only	59.00

KidWind PROJECT COMPREHENSIVE WIND KIT

FULL KIT

With this package students can explore wind turbines, wind energy resources around their school, and the characteristics of wind as it moves around the earth.

- (1) ALTurbine Full Kit, including Weight-lifter pack
- Geared Turbine Full Kit, NO water pump/cylinder set included
- (1) Basic Turbine Kit, NO multimeter included
- (1) Mini Turbine Full Kit
- (1) Green Science Windmill Generator
- (1) ALT Gears and Motor Mount Pack
- (3) 12 Hole Crimpiing Hubs
- (25) 1/4" Dowels
- (1) Visual Voltmeter
- (10) Balsa Sheets
- (10) Coroplast Sheets
- (1) water pump only

Part No. 32KW200 • Price: $610.00

KidWind PROJECT WindWise CURRICULUM

BASIC BINDER

WindWise Education is KidWind's answer to the need for comprehensive wind energy curricula for middle and high school students. Students engaged with this material will learn about a variety of aspects of wind energy development from energy efficiency and turbine design to wind-wildlife interactions. WindWise provides students with introductory concepts, real-life examples, maps, and data, allowing students to hone their critical thinking skills.

Part No. 32KW160 • Price: $96.00

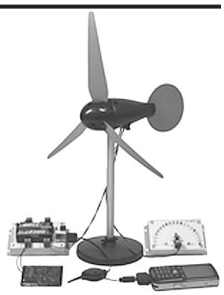
KidWind PROJECT MINI KID WIND TURBINE

FULL KIT

KidWind MINI 2.0 allows for experimenting with variable wind speeds, powering low load electrical devices, and effectively demonstrating how wind power works. With the included sound and light board users can illustrate power output by playing music and lighting additional LEDs. The blade set that comes with this turbine has been specifically molded for ideal power output giving this turbine some serious voltage. Although a single MINI will not power the water pump on its own, wiring two or more MINI turbines in parallel will give you enough power to pump water. Try adding one MINI at a time to see how it affects the amount of water being pumped!

Part No. 32KW140 • Price: $32.95

WIND CHARGE PLUS



This high power Wind turbine can be used for recharging practically anything. Examples: NiMH batteries, Fuel Cells, Mobile Phones

All accessories shown in the picture are sold separately in the accessory section.

Part No. 32PTWCP366 • Price: $74.95

KidWind PROJECT BASIC TURBINE

FULL KIT

The Basic Turbine is a great start for teaching about wind energy in the classroom. This is the most affordable and robust wind turbine kit on the market. Design blades and test your power output with a multimeter, LED bulbs, or an ultra capacitor.

includes:

- All pipe / fittings (or wood) to build turbine
- (1) DC Generator w/Hub
- (25) 1/4" Dowels
- (5) 18" Balsa Wood Sheets
- (5) 16" Coroplast Sheets
- Simple Multimeter
- Small DC Motor w/Propeller
- Ultra Capacitor
- Alligator Clip Cords
- (2) LED Bulbs
- Protractor
- Black Propeller
- Sandpaper
- Curricular Materials
- Assembly Instruction

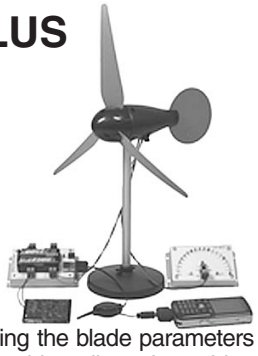
Part No. 32KW110 • Price: $81.50

KidWind PROJECT SCIENCE FAIR – FULL KIT

This kit includes a variety of materials to help you build your own wind turbine. It is a collection of hard-to-find materials that we use when experimenting. This kit does not include materials to build a tower; that is for the student to figure out! Building and testing your own wind turbine can take many hours. This kit includes a packet of ideas to try.

Part No. 32KW150 • Price: $65.00

WIND LAB BASIC PLUS



High power mini wind turbine (wind power generator) designed for students to learn the Wind Power Technology. The wind turbine converts Kinetic energy in the wind to electrical energy. You can do various experiments with it to understand how wind turbine works to generate electricity.
Profiled blades are included with this turbine to generate high power.
Sheet Blades are also included for evaluating the blade parameters at different wind speeds. The vane on the turbine aligns the turbine automatically to the direction of wind. Blades and Vane are made of Polypropylene sheet. Students can use any suitable sheet materials to make their own blades for evaluation.
The special 3 Phase AC Alternator used in the turbine is similar to the one used in real commercial wind turbine.
Gold Capacitor is included inside the wind turbine to store the energy harvested from the wind. The LED inside the turbine lights up to indicate that electrical energy is being converted from the wind.

Features:

- Mini Wind Turbine (wind power generator)
- Kit for learning Wind Power Technology
- Gold Capacitor for storage of generated electricity
- Profiled Blade, BP-38 (3 Pc) included
- Blade parameters can be modified by user for evaluation
- Vane aligns the generator automatically to the direction of wind
- Special 3-Phase AC Alternator

Part No. 32PTWL367 • Price: $84.95

velleman SOLAR ENERGY EXPERIMENT KIT

Solar Edukit: Fun solar powered projects. Learn all about solar energy.

Features

- Part of our EDUKIT range
- Clear instructions
- 10 exciting projects
- With micro controller
- HQ breadboard
- No soldering required!
- Projects include: solar led, solar attention grabber, solar cricket, solar battery charger, solar musical instrument, IR remote tester, solar garden light, solar motion detector, solar alarm simulator, ...

Specifications

- breadboard dimensions: 80 x 60mm / 3.15" x 2.36"

Part No. 32VKEDU02 • Price: $24.95

5-IN-1 ELECTRONIC KIT – EXPERIMENTS IN LIGHT AND SOUND

Offers kids five different experiments:

- Morse code
- Electricity sound
- Rain detector
- Burglar alarm
- Flash light

Has especially designed case to store all components

Part No. 32SM231 • Price: $6.95

velleman H-RACER 2.0 IR & HYDROGEN STATION KIT

This futuristic hydrogen car science kit is an amazing way to demonstrate the use of cutting-edge alternative energy and automotive technologies. Its partly transparent body displays the inner mechanics of the car. The car's assembly instructions make it easy and fun to build, and also provides interesting education on real-world challenges.

- Recommended age: 12 years and up
- This kit contains:
  - H-racer chassis & body
  - Fuel cell system components
  - Hydrogen refuelling station (2 x 1.5V AA, LR6C, not incl.)
  - Solar panel & connectors
  - Infrared remote control (3 x LR44, not incl.)
  - Assembly & operation manual

Part No. 32VKKNS11 • Price: $139.95

velleman FUEL CELL CAR SCIENCE KIT

This Fuel Cell Car Science Kit uses a reversible PEM fuel cell that combines electrolysis and power conversion into one single device. Watch as oxygen and hydrogen gases are formed in two transparent water containers. The car steers independently of the user once in operation: when the car hits a barrier, it will automatically find its way by reversing away 90 degrees. This fun science kit combines cutting-edge science, education and fun for all!

Features

- Recommended age: 14 years and up
- This kit contains:
  - PEM reversible fuel cell module
  - Car chassis & wheels
  - Electric motor
  - Flashing LED lights
  - Water vessels
  - Gas collectors
  - Connector cables
  - Syringe
  - Battery pack for 2x 1.5V AA batteries (batteries not incl.)
  - User manual on CD

Part No. 32VKKNS10 • Price: $79.95

MAGNETISM AND ELECTRICITY EDUCATION LEARNING KIT

Learn about magnetism and electricity. Includes a manual with various experiments. Includes magnet, iron filings, magnet wire, DC motors, Galvanometer.

Part No. 3200MEX • Price: $27.95

OWIKIT™

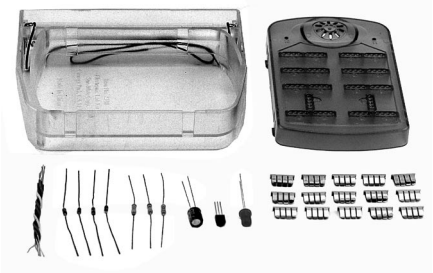
SOLAR SYSTEM

Young astronomers will delight in OWI's newest Mini Solar Kit – as they build, paint and watch their very own Solar System come to life with real solar energy. Planets orbit around the solar-paneled "sun" that drives a motor so the planets actually move. This excellent educational solar kit provides a hands-on lesson about how solar power drives a motor. The kit comes with 6 colors of opaque acrylic paint, plus brush—which makes for the perfect exercise in science and creativity.

Part No. 32OWIMSK679 • Price: $18.90

5-IN-1 ELECTRICITY EXPERIMENTS

Five different experiments:

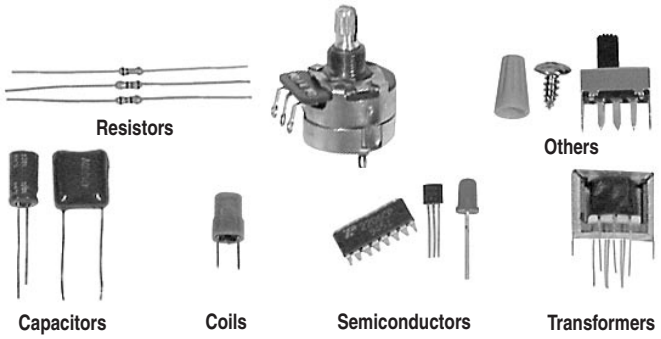


- Morse Code
- Electricity Sound
- Rain Detector
- Burglar Alarm
- Flash Light

Has especially designed case to store all components.

Part No. 32SM232 • Price: $6.95

LEARN ELECTRONIC COMPONENTS



28 page manual with dozens of illustrations includes detailed description of all parts, their function in a circuit, color codes and five self tests. Over 50 parts with the course!

Part No. 3200ECK10 • Price: $9.95

SOLAR -LAB-1.0

9 ELECTRICITY LEARNING KIT LABS

This newly designed solar education kit has been created to teach students of all ages, solar cell and electrical circuitry concepts. It contains 9 step by step labs that walk users through easy to understand experiments. Each lesson teaches everything young learners will need to gain introductorily knowledge on solar cells as they integrate them into various circuits.

Product Highlights:

- Step by step manuals for using solar cells to power electronic devices
- Includes a solar powered battery charger (batteries included)
- Includes a 7-function multimeter for circuitry testing and experimentation Includes high quality solar cells

Part No. 32PTSL1ELK • Price $53.95

THE SOLAR STOVETOP COOKER PATTERN

This set of patterns and templates allow you to make a real solar cooker capable of reaching over 600 degrees F. in a matter of minutes! A great renewable energy project. Impress people at your next BBQ with broiled solar burgers! A practical device if you lose power too. The kit includes templates to use for cutting all parts, step by step instructions, and recipes for use with the cooker. Adult supervision is needed when cooking, because the temperature is about the same as the "medium" setting on a real stove, enough to cook meat, fish, and vegetables.

Part No. 32PTSSCP • Price: $15.95